

2981952

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Safe coupling relay with force-guided contacts, 5 N/O contacts, 1 N/C contact, plug-in screw terminal block, width: 22.5 mm

Your advantages

- Up to Cat. 1/PL c in accordance with EN ISO 13849-1, SIL 1 in accordance with IEC 61508
- Safe readback due to force-guided signal contact in accordance with EN 50205
- · Easy proof test according to IEC 61508 thanks to integrated signal contact
- 1 or 2-channel control
- 5 enabling current paths, 1 confirmation current path

Commercial data

Item number	2981952
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DNA162
Product key	DNA162
Catalog page	Page 246 (C-6-2019)
GTIN	4046356343343
Weight per piece (including packing)	171.8 g
Weight per piece (excluding packing)	142 g
Customs tariff number	85364900
Country of origin	DE



2981952

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Technical data

Notes

ote on application	
Note on application	Only for industrial use
oduct properties	
Product type	Coupling relay
Product family	PSRclassic
Application	Safe switch off
	High demand
	Low demand
Control	1 and 2 channel
Mechanical service life	10x 10 ⁶ cycles
Relay type	Electromechanical relay with force-guided contacts in accordance with IEC/EN 61810-3
Insulation characteristics	
Overvoltage category	III
Degree of pollution	2

Electrical properties

Restart time

Maximum power dissipation for nominal condition	8.56 W (at U_B = 26.4 V DC, U_S = 24 V, I_S = 47 mA, n = 1, I_L^2 = 72 A², $R_{contact}$ = 0.1 Ω 🖾
Nominal operating mode	100% operating factor
Rated insulation voltage	250 V
Rated surge voltage/insulation	4 kV / basic isolation (safe isolation, reinforced isolation and 6 kV between A1/A2, 53/54, 71/72 and 13/14, 23/24, 33/34, 43/44.)

< 1 s (Boot time)

Input data

General

Rated control circuit supply voltage U _S	24 V AC/DC -15 % / +10 %
Power consumption at U _S	typ. 1.2 W
Rated control supply current I _S	typ. 47 mA
Input voltage range	20.4 V AC/DC 26.4 V AC/DC
Inrush current	typ. 350 mA DC (Δt < 1 μs at U_s)
	typ. 350 mA AC (Δt = 2 ms at U _s)
Typ. starting time with U _s	typ. 20 ms (when controlled via A1)
Typical release time	typ. 20 ms (when controlled via A1)
Recovery time	< 500 ms
Maximum switching frequency	0.5 Hz



2981952

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Protective circuit	Surge protection; Varistor
Operating voltage display	1 x LED (green)

Output data

Contact switching type	5 enabling current paths
	1 confirmation current path
Contact material	$AgSnO_2$
Maximum switching voltage	230 V AC/DC (Observe the load curve)
Minimum switching voltage	5 V AC/DC
Limiting continuous current	6 A (N/O contact)
	6 A (N/C contact)
Maximum inrush current	6 A
Inrush current, minimum	10 mA
Sq. Total current	72 A ²
Interrupting rating (ohmic load) max.	144 W (N/O contact, 24 V DC, τ = 0 ms)
	288 W (N/O contact, 48 V DC, τ = 0 ms)
	240 W (N/O contact, 60 V DC, τ = 0 ms)
	110 W (N/O contact, 110 V DC, τ = 0 ms)
	88 W (N/O contact, 220 V DC, τ = 0 ms)
	1380 VA (N/O contact, 230 V AC, τ = 0 ms)
Maximum interrupting rating (inductive load)	42 W (N/O contact, 24 V DC, τ = 40 ms)
	42 W (N/O contact, 48 V DC, τ = 40 ms)
	42 W (N/O contact, 60 V DC, τ = 40 ms)
	42 W (N/O contact, 110 V DC, τ = 40 ms)
	42 W (N/O contact, 220 V DC, τ = 40 ms)
Switching capacity	min. 50 mW
Switching capacity (360/h cycles)	4 A (24 V (DC13))
	4 A (230 V (AC15))
Output fuse	10 A gL/gG (N/O contact)
	4 A gL/gG (N/O contact, for low-demand applications)
	6 A gL/gG (N/C contact)

Connection data

Connection technology

pluggable	yes
Conductor connection	
Connection method	Screw connection
Conductor cross section rigid	0.2 mm² 2.5 mm²
Conductor cross section flexible	0.2 mm² 2.5 mm²
Conductor cross-section AWG	24 12
Stripping length	7 mm
Screw thread	M3
Tightening torque	0.6 Nm



2981952

https://www.phoenixcontact.com/au/products/2981952

Dimensions

Width	22.5 mm
Height	114.5 mm
Depth	99 mm

Material specifications

Color (Housing)	yellow (RAL 1018)
Housing material	PA

Characteristics

Safety data

0
1
С
1
1
1

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Ambient temperature (operation)	-20 °C 55 °C
Ambient temperature (storage/transport)	-40 °C 85 °C
Maximum altitude	max. 2000 m (Above sea level)
Max. permissible humidity (storage/transport)	75 % (on average, 85% infrequently, non-condensing)
Max. permissible relative humidity (operation)	75 % (on average, 85% infrequently, non-condensing)
Shock	15g (In the event of stress caused by shock, contact reactions are possible for up to 2 ms.)
Vibration (operation)	10 Hz 150 Hz, 2g (In the event of stress caused by vibration, contact reactions are possible for up to 1 ms.)

Approvals

CE

OL	
Certificate	CE-compliant

Mounting



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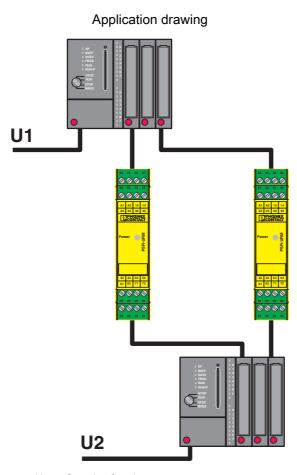
Mounting type	DIN rail mounting
Mounting position	vertical or horizontal



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Drawings



Reliable signal exchange between two systems with confirmation function.

Block diagram



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Approvals

🌣 To download certificates, visit the product detail page: https://www.phoenixcontact.com/au/products/2981952



Functional Safety



Functional Safety

Approval ID: 4478015124312



cULus Listed

Approval ID: E140324



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Classifications

ECLASS				
	ECLASS-13.0	27371819		
ETIM				
	ETIM 9.0	EC001449		
UNSPSC				
	UNSPSC 21.0	39122200		



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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I
China RoHS	
Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.
EU REACH SVHC	
REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	003ff684-57d0-4e3e-87ba-5bd5dc623931

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